

U.S. Serial No. 09/470,026
Response to Office Action dated October 6, 2004

REMARKS

Applicants have carefully reviewed the office action dated October 6, 2004. Claims 1-21, 30, 36, 42-46, and 50-56 are pending. Claims 1-20, 30, 36 and 42 have been withdrawn from consideration. Claims 21, 43-46, and 50-56 have been rejected.

Claims 21 and 50-54 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nash et al., U.S. Patent 6,080,170 (hereinafter Nash) in view of Muni, U.S. Patent 6,135,991 (hereinafter Muni). Applicants respectfully traverse this rejection. In order for a combination of references to render a claim obvious, there must be some motivation in the prior art to combine the references. See M.P.E.P. §2143.01. Applicants assert that there is no such motivation in this case because Muni teaches away from the combination and the combination would alter Muni's principle of operation. In addition, Nash also contains language that would further deter one of ordinary skill in the art from combining these references.

Muni states that the invention "eliminates the need for a separate irrigation and catheter and irrigation fluid." See Column 2, Lines 53-54. This statement clearly indicates that the concept of the invention is to keep the operation of the device as simple as possible and avoid having both aspiration and irrigation systems. Thus, Muni teaches away from having both irrigation and aspiration systems. In addition, Muni states that the system uses "the fluid pressure and flow within the blood vessel" to provide for the pressure to aspirate the area of interest. See Column 2, Lines 51-52. The blood flow and pressure acts as the irrigation system. Adding an irrigation system would change the principle of operation of Muni. The principle of operation of Muni is to use the blood flow and pressure as the irrigation source. Nash is a device that has a different principle of operation, with both

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irrigation and aspiration systems built in. Because of these differences, Applicants assert that one of ordinary skill in the art would not be motivated to combine these references.

For similar reasons, the disclosure of Nash would deter one of ordinary skill in the art from combining these references. As mentioned above, the fact that Muni calls for no separate irrigation and aspiration features on the device and Nash calls for separate irrigation and aspiration features would deter one from combining these references. However, the principle of operation in Nash is different from that in Muni for at least one additional reason. In Nash, the irrigation fluid is pumped down the atherectomy catheter, where it can effectively irrigate the head of the atherectomy device and the site of treatment. The paragraph starting at Column 5, Line 6, states:

"The fluid flow system is arranged to introduce an infusate liquid at a first flow rate adjacent the working head and to withdraw that liquid through the passageway between the guide catheter and the lumen opening catheter at a second and higher flow rate to create a differential flow adjacent the working head, whereupon debris produced by the operation of the working head is withdrawn by the differential flow and flows with the liquid proximally through the passageway for extraction."

Specific examples of this are given in several locations, including the paragraph beginning at Column 8, Line 60, where Figure 3 is described. Because Muni does not have separate irrigation and aspiration features, it would not be possible for the features of Muni to satisfy the requirement that there be a tightly controlled differential flow adjacent the working head of the device. This is because, in order to have tightly controlled differential flow around the head of the device in the manner described in Nash, there must simultaneously be aspiration and irrigation (see the above quoted passage in support of this proposition). Again, this shows that these two patent documents have markedly different principles of operation and no motivation can be found to combine the two.

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Because both of the cited documents effectively teach away from the combination, Applicants respectfully assert that there is no motivation to combine, and that it would not have been obvious for one of ordinary skill in the art to combine these references. Applicants respectfully request that the §103(a) rejection of claims 21 and 50-54 be withdrawn, and the claims allowed.

Claims 43-46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nash in view of Imran, U.S. Patent 5,833,650 (hereinafter Imran). Applicants respectfully traverse this rejection. In order for prior art to render a claim obvious, all of the elements of the claim must be taught or suggested in the prior art. See M.P.E.P. §2143.03. Nash does not disclose at least one element of independent claim 21. Specifically, Nash does not disclose the infusion of fluid through infusion ports located on the side of the aspirating catheter. Because the Applicants assert that the combination of Nash and Muni are not proper, the elements that are missing from the disclosure of Nash must be supplied by another reference in order for independent claim 21 to be found obvious. Imran does not supply this missing element. Because they are dependent on claim 21 and because they contain additional patentably distinct elements, all elements of claims 43-46 are not disclosed in the cited prior art. Applicants respectfully assert that dependent claims 43-46 are patentable over Nash in view of Imran.

Finally, claims 55 and 56 were not specifically rejected in the written portion of the office action. However, Applicants assert that, because these claims are dependent on allowable claim 21, and because they recite additional patentably distinct elements, Applicants assert that they are also allowable.

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Information Disclosure Statement

Applicants note, that a copy of the initialized Form 1449 for the Information Disclosure Statements submitted on August 24, 2001 and July 2, 2002 have not been provided. As such, Applicants request that the Examiner promptly provide a copy of the signed IDS in accordance with MPEP § 609.

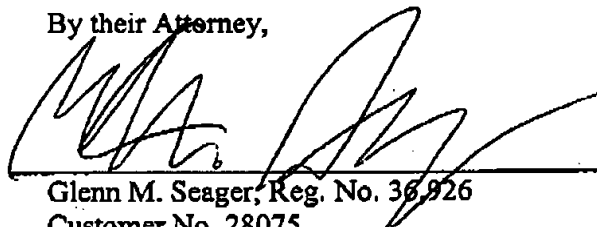
Reexamination and reconsideration are requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is also respectfully requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

YUE-TEH HANG ET AL.

By their Attorney,

Date:

Nov. 29, 2004

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